

Building the foundation to improve risk assessments of pesticide use in Aotearoa New Zealand

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INTRODUCTION

According to the FAO, pesticide use in Aotearoa New Zealand (NZ) is about twice as high as the average in the European Union, and seven times higher than in Denmark (Figure 1).

Information on the current **use and occurrence of pesticides** in the soils, lakes and waterways of NZ is very limited. For instance, national surveys of groundwater have been completed **only every four years** since the 1990s. In the last survey, none of the pesticide concentration exceeded the Maximum Acceptable Values for drinking water in NZ, but they often exceeded the limits established in other regions (e.g. 23% detections exceeded the European Union limit in both 2014 and 2018).

No comprehensive surveys of pesticides in our rivers and lakes have been undertaken, and concentrations of pesticides in soils are mostly unknown.

These **data gaps** make the impact assessment of pesticides on human and environmental health difficult. It also prevents optimal regulation of pesticide usage and limits the development of effective mitigation measures.

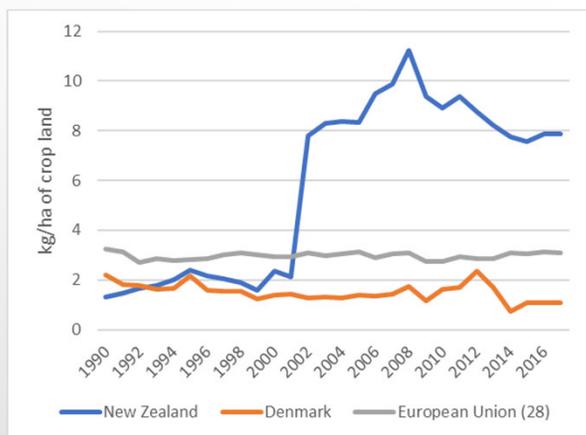


Figure 1. Pesticide use in kg per ha of crop land

www.fao.org/faostat

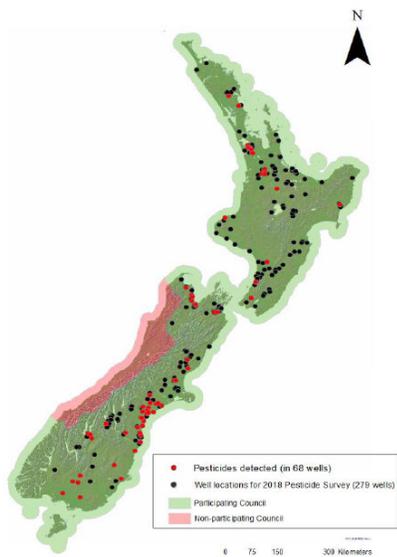


Figure 2. Latest groundwater monitoring programme. 112 detections in 68 wells out of a total of 279 wells sampled [1]

THE PROJECT

This project aims to build an enduring partnership between NZ and Denmark, a world leader in the monitoring and management of pesticide use.

Denmark's success stems from a science-driven programme called PLAP [2] that has generated high-quality monitoring data over the past 20 years and has gathered strong support by a broad range of stakeholders. The goal of our project is to evaluate the applicability of a PLAP-like approach in NZ and establish a strong foundation to improve pesticide use and management. Our work will include:

- a high-quality **monitoring** of pesticide residues in soils in NZ
- **engagement** activities with stakeholders and
- recognition of the **specificities of NZ**, and in particular Māori knowledge, culture, values and world views.

WOULD YOU LIKE TO GET INVOLVED?

- We are organising interviews to collect a range of views on the current status of pesticide assessment in Europe. **Let us know if you like to participate.**
- We are planning a soil monitoring programme: **which compounds/metabolites would be your priority?**
- We currently rely on fate data and models developed in the Northern Hemisphere. **What do you think about their applicability to NZ?**

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REFERENCES

- [1] Close and Humphries (2019) National Survey of Pesticides and Emerging Organic Contaminants (EOCs) in Groundwater 2018
- [2] PLAP <http://pesticidvarsling.dk/>

